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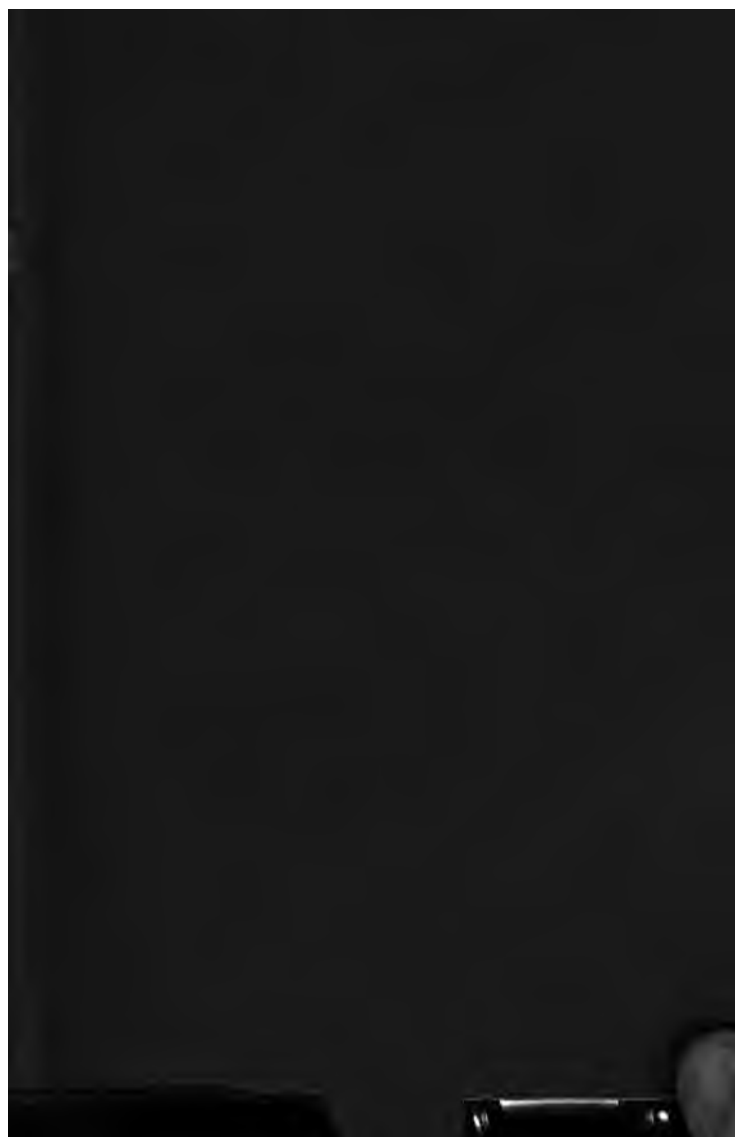
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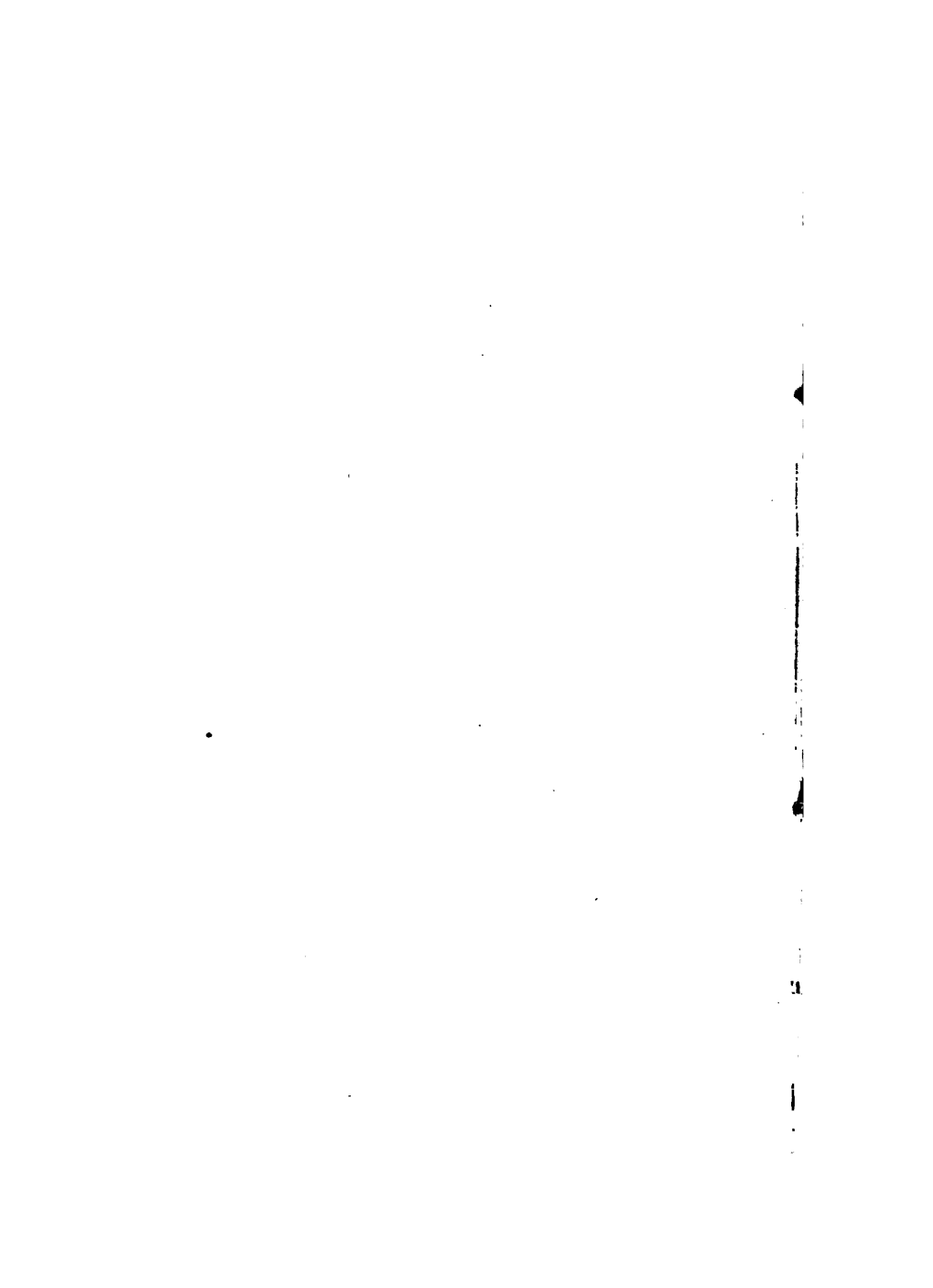
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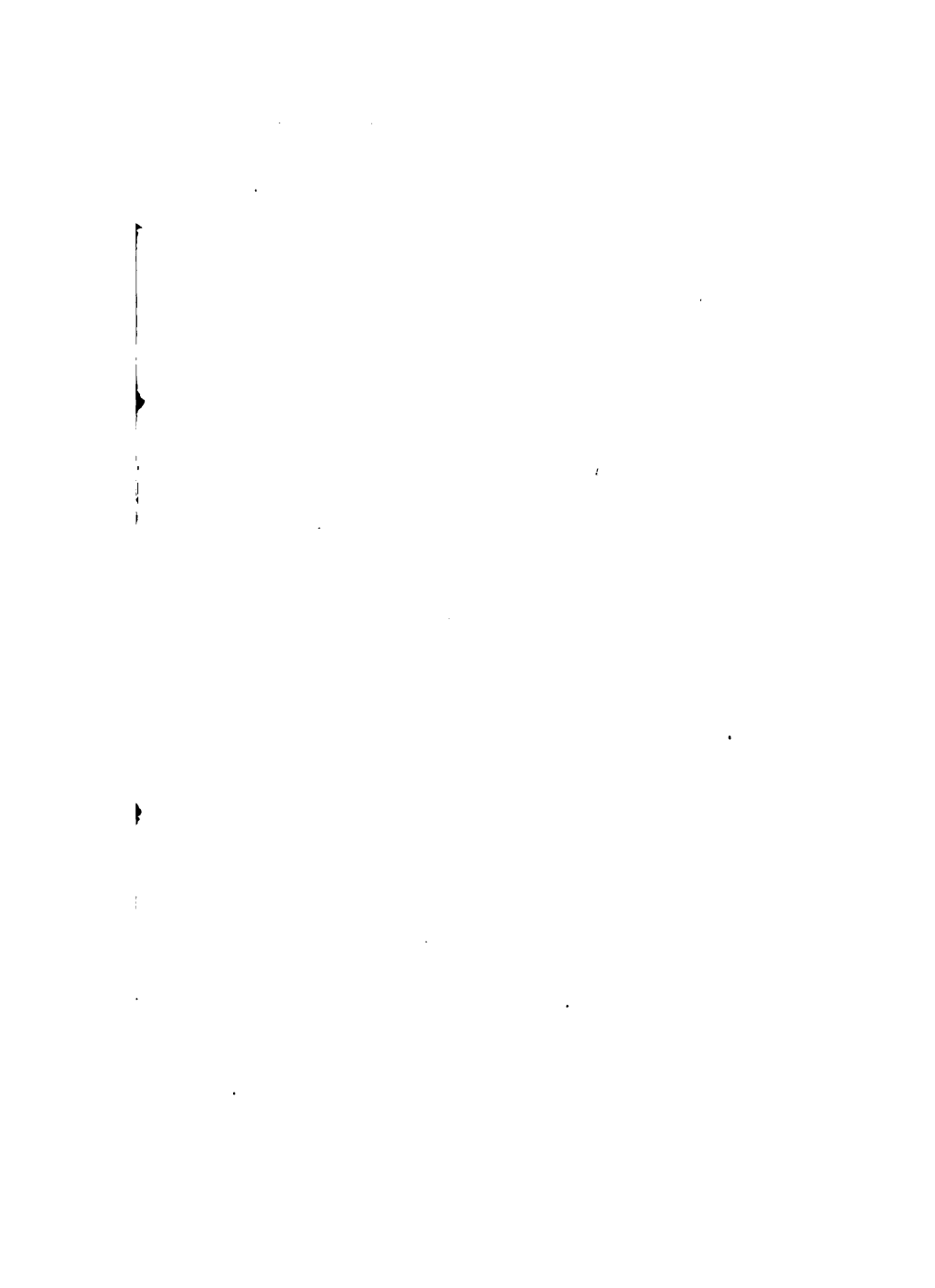
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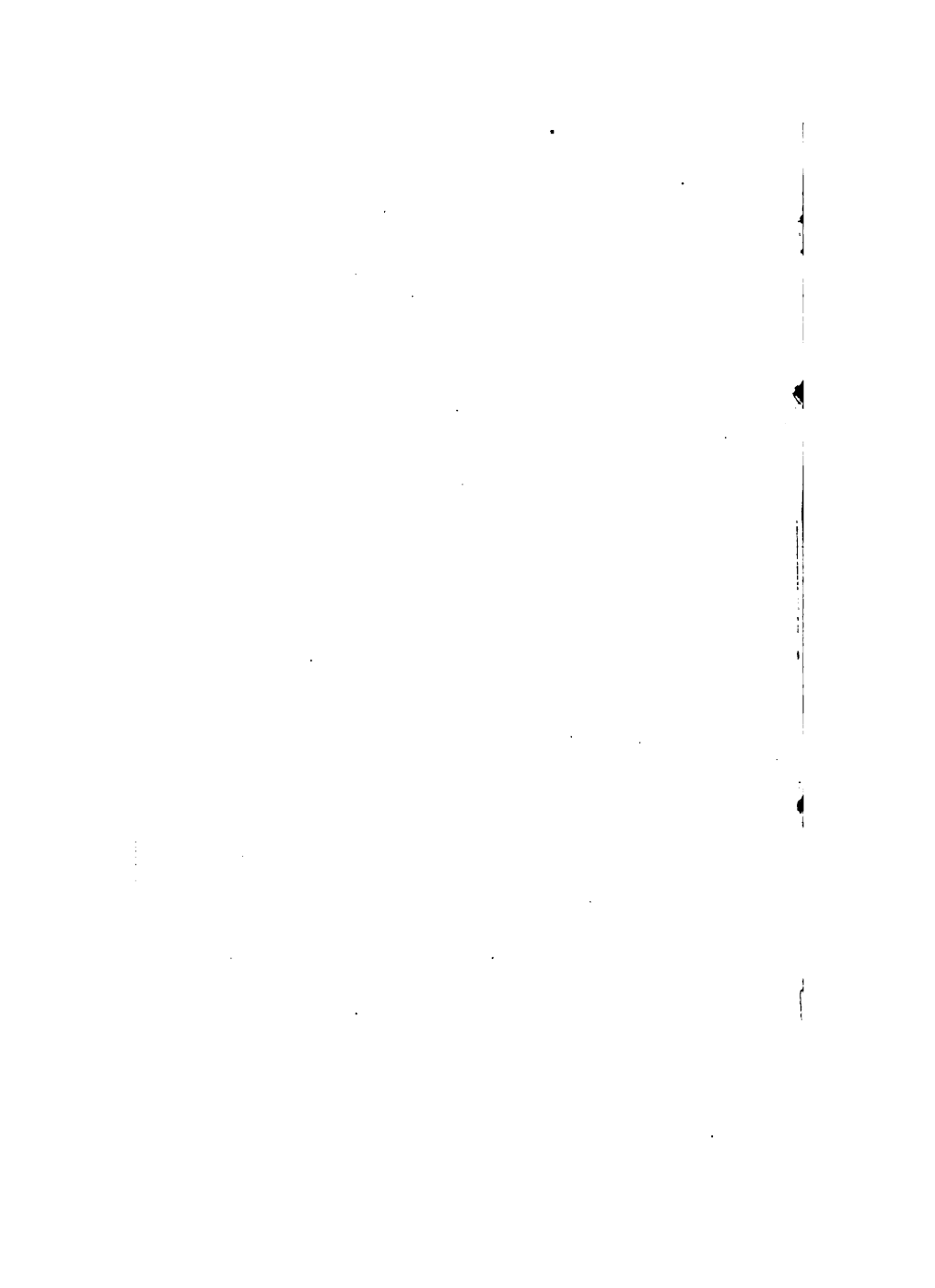
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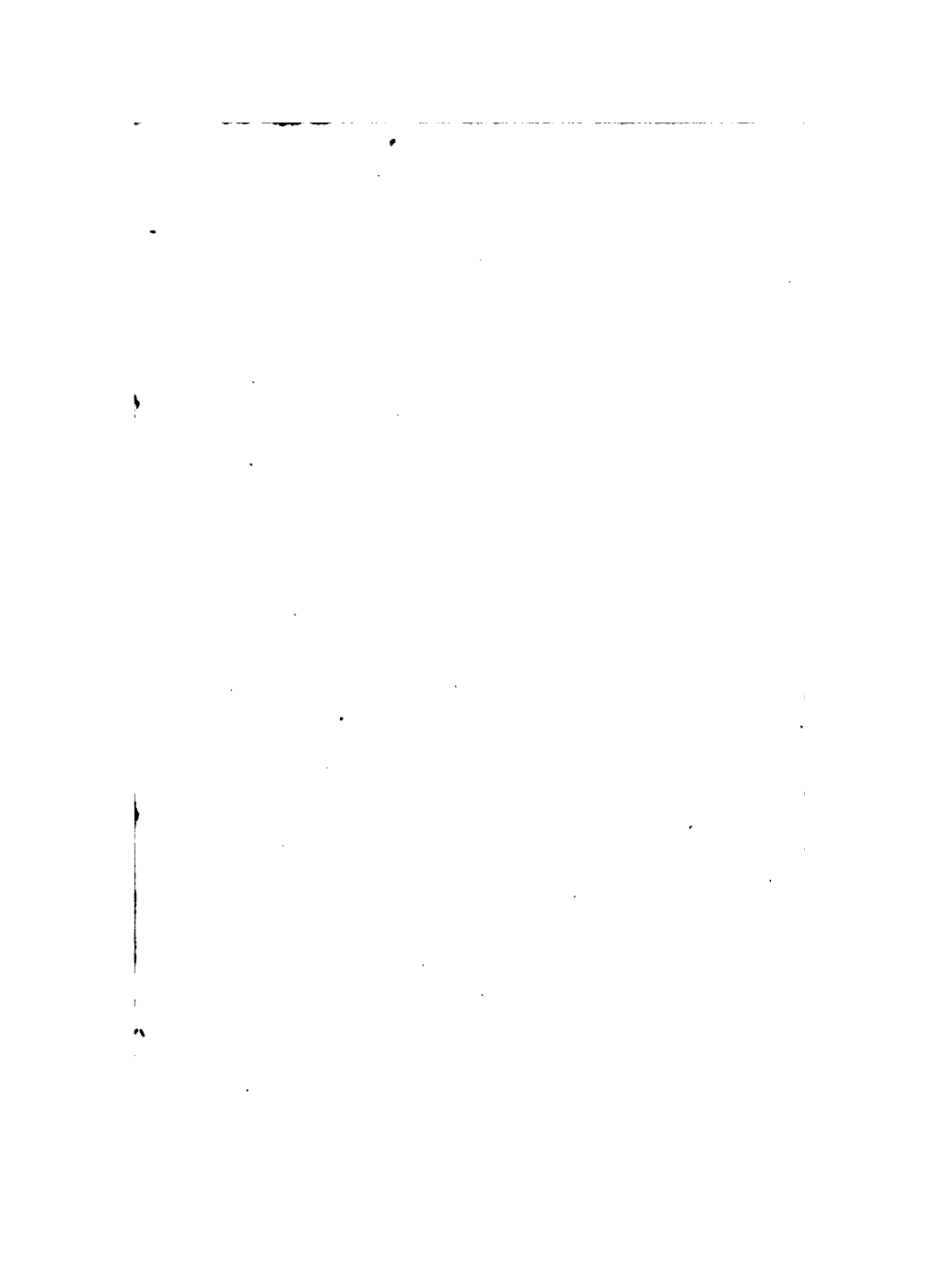
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THE EVILS OF TOBACCO.

CHARLES

W. H. H. H.

W. H. H. H.

W. H. H. H.

Ever *Chas. G. ...*

THE
USE OF TOBACCO,

AND

THE EVILS,

PHYSICAL, MENTAL, MORAL, AND SOCIAL,

RESULTING THEREFROM.

BY

JOHN H. GRISCOM, M. D.,

PRESIDENT OF THE NEW YORK ASSOCIATION FOR THE ADVANCEMENT
OF SCIENCE AND ART, AND TWENTY-THREE YEARS ATTEND-
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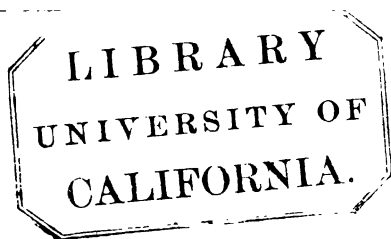
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THE USE OF TOBACCO

AND

ITS EVILS.

THE effects of Tobacco upon the physiological organs and functions are as clearly manifest and understood as those of any other medicinal substance. It has long been included as an article of the *Materia Medica*, and is as well known to possess properties available for the treatment of certain diseases, as is Opium, *Ipecacuanha*, *Digitalis*, *Belladonna*, Camphor, or any other.

Like most other medicinal vegetables, its peculiar powers are dependent upon a special ingredient, which is capable of being extracted in a separate and distinct form, and which, in its natural state, is distributed through the whole structure of the plant. This ingredient is in the form of a Volatile Oil, obtainable by distillation at a high temperature, and in which the peculiar properties

of the plant are nearly all concentrated. It is known by the name of *Nicotine*, and is remarkable for an unusual combination of properties. In its separate and pure form, it has been demonstrated to be a *virulent poison*, when administered internally, acting as rapidly as Prussic acid or strychnine. A single drop of the oil injected into the body of a cat by Sir Benjamin Brodie, caused its death in five minutes; and double that quantity administered in the same manner to a dog was followed by the same result. An instance occurred in Brussels, in 1846, of a homicide produced in a few minutes by a small quantity of nicotine being forced into the mouth of the victim.*

A single drop applied to the tongue of a cat will cause convulsions, and in two minutes, death. More recently, a simple decoction of 12 grains of the plant itself, in six ounces of water, used as an enema, proved fatal to a human adult (Brit. and Foreign Med. Review, Vol. XII., p. 562). Sir Astley Cooper and Sir Charles Bell have also related cases of mortality resulting from the same cause.

Another illustration of the poisonous effects of

* It was proved that the criminal, known as Count Bocarmé, had prepared a small quantity of the oil by the distillation of tobacco, and forced it into the mouth of his brother-in-law, 30 years old, causing his death in a few minutes.

the plant itself very recently occurred in Staffordshire, England. A coroner's inquest was held on the body of a respectable grocer, aged 29, who had been drinking, and put into his mouth the greater portion of half an ounce of tobacco. He would not remove it from his mouth, and he became insensible, falling suddenly, and apparently swallowing a portion of the tobacco. He died in three days, and the verdict was according to this evidence.

Another demonstration of its fatal influence has very recently occurred in Ohio, reported by Dr. W. J. Tyrell. He was called to see a sprightly little girl who, three weeks previously, had her upper lip burned and bruised by falling upon a cooking stove. On the day before his visit she had been as well as usual all the forenoon, but in the afternoon her mother had decided to heal the sore; for which purpose she emptied the ashes from her pipe, then with her finger wiped the oil from the bowl, and applied it to the lip. The effect was violent convulsions, resulting in death within twenty-four hours.

Like all other substances possessed of these active properties in their pure form, this ingredient, when applied to the animal structure in its diluted form, by smoking and chewing tobacco, exhibits

its influence in various other modes. Thus, it sometimes acts as a *sedative*, a *narcotic*, an *emetic* and a *diuretic*. In addition to these, when tobacco is snuffed up the nostrils, it excites violent sneezing and copious secretion of mucus; when chewed, it irritates the lining membrane of the mouth, and increases the flow of saliva; and when used as an injection, it acts as a *cathartic*.

But its most powerful effects are upon the nervous system, and the mental faculties. In very moderate quantities, it sometimes quiets restlessness, and produces a state of general languor; but when extensively used it often produces confusion of the head, dizziness, stupor, faintness, nausea and vomiting, and great debility of the circulation, frequently resulting in alarming and sometimes fatal prostration. Coldness of the skin, and occasional convulsions are produced by its long continued and excessive use in the form of smoking and chewing.

➤ The action of the heart is affected by it directly through the nervous system. Other functions also, especially those of digestion, are enfeebled by its abundant use, thereby preventing nutrition and producing emaciation and general debility, and, as a secondary consequence, impairing the tone of all the other functions and diminishing the growth

and development of the entire body, and also of the mental powers.

The fact that it is employed for the medicinal treatment of certain symptoms, especially those of the nervous system, is sufficient evidence of the properties above mentioned, while the peculiar and powerful character of its action upon the various functions of the body, prove indisputably that tobacco is solely a medicinal substance, and that its use in health must necessarily impair the integrity and soundness of these same functions, which are the most important of all. Its use is to be regarded, therefore, in a similar light as that of opium, the value of which as a medicine is very great, when judiciously administered, but when swallowed in a state of health, as is practised by the class known as "Opium Eaters," its effects are invariably injurious and frequently fatal.

Its most direct and manifest effect when first applied to the animal system, in almost any form, is that of an *emetic*. In illustration of this property the writer hereof well remembers the results upon his person. When about ten years of age, he was induced by a school mate one morning after breakfast, and before school time, to smoke a mild segar. A few puffs, very much to his surprise, sufficed to cause a total loss of the meal taken a short time

previously, and kept him in a state of nausea during all the morning, rendering him incompetent to maintain his position in the school classes.

It is sometimes employed for the same purpose in medical treatment, but very rarely, because of the excessive prostration it produces, this effect being more marked than by the use of any other emetic, not even excepting Ipecac or Tartar Emetic. This same exhausting influence upon the nervous system, and upon the circulation of the blood, is observable in many habituated to it, even when its emetic power is not manifested.

7 Its *narcotic* property produces a depressing and sedative effect, which, when not needed for the relief of suffering, is more or less exhaustive of the nervous functions, and hence depresses nearly all the other functions, especially the digestive, circulating and muscular powers, which depend upon the integrity and capacity of the nervous system for their full and healthful operations.

From several distinguished medical authorities, illustrations will now be quoted of the evil influences of tobacco manifested by other striking effects.

Mons. Decaisne, in a communication to the French Academy of Sciences, exhibits another clause in the heavy bill of indictment against its

use. In the course of three years he met, among 88 inveterate smokers, 21 instances of marked *intermission of the pulse*, occurring in men from 27 to 42 years of age, which could not be explained by any organic lesion of the heart, thus proving it to be caused by disturbance of the nerves which control that organ. In nine of these cases, when the use of tobacco was abandoned, the normal action of the circulation was restored. The condition of the heart in these cases he terms "Narcotism,"* and is characterized by intermission of the movements of that organ, and of the pulsation of the arteries. A suspension of the practice of smoking is sufficient in some cases to cause an entire disappearance of this irregularity.

The opinion has long been entertained that tobacco is a frequent cause of *loss of sight*. The diseased condition of the eyes produced by it is a species of amaurosis (paralysis of the optic nerve), commencing with symptoms of functional brain disease, and alterations of the supply of blood to the optic nerve and retina. These affections occur in large excess in adult males, being very infrequent in women, and a large portion of those who suffer from it have been smokers.

* A species of *numbness* characterized by vertigo, and a degree of intoxication or apoplexy, accompanied with convulsive motions.

Mons. Viardin has reported three cases of the same disease caused by smoking. In the treatment of these cases, the quantity of tobacco smoked was reduced under his direction, and the sight was restored in the course of a few weeks.

[At a meeting of the Harveian Society of London in November, 1864, Dr. Drysdale stated that he had recently remarked cases of *jaundice* in healthy young men, evidently produced by great smoking, such as three quarters of an ounce to an ounce of tobacco a day. Profuse smoking, he believed, tended to lower all the appetites, whether for exercise, food, or sex.]

Mr. Curgenvven observed that *dyspepsia* and *palpitation of the heart* were among the most common consequences of excessive smoking. A gentleman from Havana, a patient of his, an excessive smoker, who rarely had a segar out of his mouth, had, one day, an attack of *syncope* (sudden and complete loss of sensation and motion), which he had attributed to a habit during many years of smoking on an empty stomach. A medical friend of his had suffered greatly from nervousness and dyspepsia, owing to excessive smoking. He left off the habit and recovered.

[Mr. Weeden Cooke observed that tobacco smoking affected different persons very differently.

Many gentlemen, from 30 to 35 years old, came to him, complaining of *impotence*; and he had generally found them profuse smokers. He supposed tobacco, like opium, was a useful drug in some cases, but, like opium, liable to injury when taken in excess.

The President said excessive smoking caused nervous diseases, conjoined with dyspepsia and *deranged liver*; DILATED PUPIL and AMAUROSIS were caused, he believed, by it, and in a case he had lately sent to an eminent oculist, the ophthalmoscope had shown that gentleman that the disease was caused by the habit.

Dr. Royston mentioned the case of a ship chandler in Liverpool, an excessive smoker, who had acute *inflammation of the liver*, after an excessive bout of smoking; also the case of a clerk on the Great Western Railway, who seldom had a pipe out of his mouth, and who had fallen into a fit of intense prostration and *died*, Dr. Royston believed in consequence of his profuse indulgence in smoking. *No post mortem lesions were found.*

The truthfulness of these opinions was strikingly confirmed during the preparation of this essay, by the observation of the writer, in the case of a man 52 years of age, suffering severely from dyspepsia, dysentery, nervous irritation and other painful

symptoms, who applied for relief therefrom by medical treatment. The cause of the troubles was clearly the habit of pipe-smoking to the extent of 7 to 10 times a day, using a quarter of a pound of tobacco each week. He had continued the practice sixteen years, and for several years past he has complained of serious disturbances of the nervous system, amounting, on one occasion, to slight convulsions, which, without prompt treatment would very likely have proved fatal.

His appetite had been so much reduced by the habit, that on many occasions when called to his meals, he preferred to go into the open air to smoke his pipe, and thus greatly reduced his strength. Upon being instructed as to the real cause of his physical troubles, and the danger to which his mental powers were subject, he immediately abandoned the practice and rapidly recovered his health.

[All the friends of our Republic must feel grieved at the noted illustration of the influence of tobacco smoking in producing dyspepsia, manifested in the case of one of the most popular Heroes of the Union Army, the responsibility of whose present position requires the most vigorous health of all his physical and mental faculties, but which, from his profuse indulgence in the habit, are likely at any

moment to be seriously impaired, to the injury of the Government, as well as of himself.

It is specially desirable by the whole country that in his particular case the favor of total abstinence from this useless and dangerous practice may be speedily GRANT-ED.)

CANCER.

Cancer of the lips frequently occurs among smokers, especially on the side on which the segar or pipe is held. From this form of cancer women are almost entirely exempt.

The predominance of cancer observed in women, of almost all the organs, ceases, also, with respect to the stomach, which is found to be more frequent in men, in the proportion of 53 per cent. The danger from chewing tobacco in this relation is very great, especially as tobacco containing 6 per cent. of nicotine is usually employed, and that during fasting. Organic affections of the stomach are of great frequency among sailors who indulge in this habit.

DISEASES OF TEETH AND JAW-BONE.

Smoking has long been a popular remedy for toothache; the sailor's quid has a special reputation for this purpose. We now refer to the case

of an unfortunate patient, whose application of the remedy in a concentrated form set up inflammatory action which destroyed a large portion of his jaw. Dr. Paget, his medical adviser, states that to relieve himself from the suffering produced by a decayed tooth, he introduced into the hollow of it some of the oil of tobacco which had accumulated in the stem of his pipe. Violent inflammation of the periosteum (the membrane covering the bone) was set up, ending in death of the osseous tissue. Just under his left lower jaw the skin was ulcerated, and there was a cavity communicating with the dead bone. Dr. Paget removed several of the teeth, and then, without making any incision, contrived with a strong forceps to remove several portions of the dead bone representing a portion of the base, the angle, and a large part above the angle of the left lower jaw.

This case well illustrates a source of danger not generally recognized. Foul pipes and decayed teeth are very common. Pipe smokers are frequently disgusted by sucking into their mouths a few drops of the highly pungent and nauseous product of the combustion of tobacco.

The following testimonial of a very distin-

guished hygienist can doubtless be confirmed by thousands of tobacco smokers.

Extract of a letter from Dr. Dio Lewis:

"LEXINGTON, May 13, 1867.

"In my own mouth I have the most unmistakable proof of the mischievous influence of tobacco smoke, having while I was in college been a great smoker, and spoiled two teeth above and two below; parts that were directly affected by inhalation of the smoke."

In addition to its effects upon the teeth, the tip of the tongue which also receives the deleterious fluid, is often blistered by it.

There is good reason for the belief that many cases of disease of the jaw-bone, whose causes have been obscure, were the result of poisoning of the teeth by this liquid, and the possibility of this, as a source of disease, should be constantly borne in mind.

The manner in which this destruction of the teeth is effected is by the Nicotine contained in the smoke and in the tobacco itself being absorbed by the saliva and by the particles of food remaining in the mouth after eating; it is thus brought in direct contact with the teeth, destroying the enamel first, and afterwards rotting their whole structure. It is not unreasonable to suppose that

a considerable portion of the services now required of dentists in this and other countries, which have enormously increased of late years, is derived from the tooth-rotting effects of tobacco smoking and chewing.

The peculiarly disgusting odor of the breath of every smoker and chewer, for a long time after the practice, is positive proof of the retention in the mouth of the poisonous essence to which the teeth-destroying effects are attributable. The same effluvium is also carried into the lungs by inhalation, thus showing how the general influences hereafter described are produced.

Another popular idea of the value of tobacco which has largely promoted its use, is its supposed property of *preventing malarious and other fevers*. There has never been offered any scientifically based reason for this opinion, though it has largely prevailed among smokers, &c. The following statement given by an experienced physician, Dr. Samuel E. Wills, most decidedly demonstrates the absurdity of this notion.

“CROILTON, MARYLAND, Sep. 23, 1867.

“*To the Editor of the Med. and Surg., Reporter :*

“In reply to Dr. W. S. King's inquiry in the
“Reporter of the 14th inst, relative to the pro-

"phylactic virtues of tobacco in malarious fevers,
"I beg leave to say,—my observations for the last
"25 years as a practitioner of medicine, part of the
"time in the Chickahominy region of Virginia,
"and the last 20 years on the Eastern shore of
"Maryland, do not corroborate the theory that
"tobacco possesses any such property. Habitual
"chewers and smokers, both women and men,
"have been as frequently numbered among my
"intermittent cases, as those who never use
"tobacco."

In further confirmation of this view, Dr. John Wright, of Clinton, Illinois, writes that with good opportunities of observation, he has never seen a single case where he thought tobacco acted as a prophylactic in malarious diseases. He thinks that, if it had any such claims, they would have been put forward by those who are seeking excuses to justify them in the use of this filthy weed.

Furthermore, he says that even if it should be proven to be a prophylactic, he would rather have the ague than use it, especially while we have such a reliable prophylactic as quinine is known to be, when properly used.

James M. Clairborne, M. D., of Stewartsville, Indiana, in a letter to the same medical Journal,

dated November 8th, 1867, writes to the same effect as follows:

"As my practice is principally in the malarial region of the Wabash and Black rivers, I have good opportunities for observing the prophylactic effects of medicines, &c., and I have utterly failed to observe any prophylactic properties of Tobacco in malarial diseases; but, on the other hand, see numerous cases of malarial disease in persons who are habitual users of the 'filthy weed.' And like Dr. Wright, of Illinois, in view of the prophylactic property of Quinia in this disease, I consider the habitual and excessive use of tobacco the greater affliction of the two."

POISONING BY TOBACCO JUICE.

Dr. M. A. Marchant relates the following case. A smoker, in drawing air strongly through an obstructed pipe, in order to make it more permeable, took it into his mouth and involuntarily swallowed a dislodged plug of inspissated tobacco juice. In a short time his head became heavy, his thoughts confused, his speech indistinct, he had noises in the ears, a disagreeable feeling in the epigastrium (pit of the stomach), and dryness of the throat.

Believing that the open air would remove these

feelings, the patient went out; but the headache and giddiness increased, and he at last fell down insensible, in which condition he was, after some time, found by a passenger and carried into the house. Copious and repeated vomiting then set in; consciousness returned, but the patient fell into a restless, somnolent state. He had severe headache, *malaise*, and faintness, during the whole of the next day. The spontaneous recovery may be attributed either to the small amount of nicotine contained in the plug, or to the imperfect absorption of the poison contained in the hardened plug.

PARALYSIS.

That affections of the nervous system have enormously increased in other countries, as well as in this, especially in France, there is positive evidence; and this increase is found to be in men, almost entirely made up of cases of *progressive paralysis* (now forming more than 60 per cent. of the total in France), and whenever, in the asylums, the history of such cases has been investigated, their dependence on the abuse of tobacco has been rendered obvious. In 1856, a committee from the Queen's College of Physicians in London, in a report on the cause of death by apoplexy, within the city, stated that the bills of mortality from this


disease were very large, and that 7 in 9 cases of paralysis and apoplexy were caused by the use of tobacco; of this number more than one half were caused by snuffing. In confirmation of this is the rarity with which this form of the disease is met with in female lunatics.

Mr. Jolly's investigations have induced him to come to the conclusion that this abuse of tobacco is far more operative in the induction of this form of paralysis than is the abuse of alcohol. Among other facts tending to prove this, he adduces this one: in certain provinces in France—as Saintaigne, Limousin, Bretagne, &c., in which there is but little smoking, and an enormous consumption of brandy, progressive paralysis is well nigh unknown.

Another effect of the protracted use of Tobacco, either by smoking, chewing or snuffing, is the impairment of the sensibilities of the nerves of sense, with which the smoke, or the tobacco itself, comes in immediate contact. These are the senses of taste and smell, the sense of sight having already been shown to be often seriously impaired by it. When snuff is first drawn into the nostrils, it excites violent sneezing and copious discharges of mucus, which continues a considerable time, but when it has been practised so long that these results are diminished, then it is almost invariably

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certain that the delicate sensibility of the olfactory nerve is greatly impaired, and often destroyed; and thus, one of the protective powers furnished by nature against injurious odors is totally lost, rendering many external influences inappreciable and dangerous.

The same remark is applicable to the sense of taste, from the practice of smoking and chewing rendering the gustatory nerve insensible. 

In a person of good constitution, the suspension of the habit may restore these senses, as has often been noticed; but when continued, it is very plain that the risk of injury to the health from external sources is greatly increased, as these senses act as sentinels, guarding against the approach of inimical influences.

Dr. Cullen, one of the most able and distinguished physicians of Great Britain during the 18th century, mentions the case of a lady who had been accustomed for more than twenty years to take snuff at all times of the day; she found, at length, that indulging much in the use of it took away her appetite, and in process of time that a single pinch taken any time before dinner, pallied her appetite for that meal. But when she abstained from the use of it, her appetite returned. There can be no reasonable doubt that were all snuff takers willing

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to state their experience in this respect, immense numbers of similar character would be found to exist, and from excess of smoking, this and other effects referred to would doubtless be discovered.

→ One of the many temptations for indulgence in tobacco smoking is the opinion expressed by some professional men that the moderate use of it after meals tends to promote digestion. The reason given for this is that it excites a large flow of saliva, and thereby sympathetically increases the secretion of gastric juice. Admitting this to be true for argument sake, the idea is insufficient to justify indulgence in the habit, for the following reasons: *First*, because of the ultimate dangers threatened by it; and, *second*, because there are many other equally good promoters of digestion, which may be employed with perfect safety, and without any evil influences upon either the physical or mental powers. *Third*, a still more potent objection is one heretofore mentioned, viz.: that its *frequent* practice, which is an almost certain result, is very apt to produce dyspepsia of the most serious character, besides the numerous other evils heretofore, and hereafter to be, described.

Another serious disorder has also been noticed, as derived from the practice of smoking, viz.:

Deafness. M. Triquet states,* that, in both smokers and drinkers, an insidious and obstinate form of *Otitis* (inflammation of the ear) frequently becomes developed.

There is a kind of numbness or torpor of the ear, with a sense of cold, but rarely any pain, and no wax in the orifice. Frequently both ears are affected, but one has always commenced being so before, and is more deaf than the other. The deafness, without being very troublesome at first, rapidly increases. Noises in the ears almost always exist at an early period, and it is of importance to notice that they assume a hissing sound, eventuating* in a paralytic condition of the auditory nerve, whereby the sense of hearing is more or less impaired and often permanently lost. Those patients alone are susceptible of cure who consent to leave off the bad habit which produces the derangement.

Numerous other instances might be quoted, illustrative of the injurious and often fatal properties, but the preceding facts demonstrate sufficiently the poisonous influence of tobacco upon the physical functions, and the published cases are but a small fraction of what must have occurred; it is

* *Annales d'Oculistique.* Amer. Jour. Med. Science, Oct. 1866.

therefore very plain that the sufferers from the indulgence in the pernicious practice of tobacco chewing and smoking, are far more numerous than is known to the public, and there can be no reasonable doubt that many lives are lost thereby, which are attributed either to other and erroneous causes, or included under the common verdict "the visitation of Providence," inasmuch as no organic lesions are discoverable.

There is yet another branch of this subject, compared with which the physical effects heretofore alluded to are of comparatively trifling importance, viz.: *the disturbance and impairment of the mental faculties*. The proofs of this are as plain as those already given of its physical effects, demonstrations of which will now be given, showing that Nicotine, like Opium and Alcohol, has a very marked and peculiar influence in that direction.

Among the many known cases of its influence upon the intellectual powers, the following interesting facts are reported by M. Bertillon, in the *Union Medicale*, derived from an investigation made at the French Polytechnic School in 1855-56. He investigated 160 of the pupils who had undergone their examination, and what influence the fact of their having been smokers had upon the

results. As large a proportion as 102 of these pupils were smokers. It was found, in the classification by merit which followed the examinations, that while in the highest series a third or fourth of the pupils were smokers, in the lower series three-fourths, and in the lowest series four-fifths were smokers. Again, while among 66 confirmed smokers, their average rank of 94.5 on their entrance into the school had sunk to 98.3 (the larger the number the lower the rank), in the case of the 60 pupils who were not smokers, their rank of 71 on entrance (already 23 ahead of the smokers), rose to 67.7—being, as the result of nine months' work in common, 30 in advance of the smokers. This result of the inquiry, as regards these limited numbers, was conformable to the prior experience of the school.

In this case, the pupils being chiefly a younger class of smokers, they probably indulged in the practice to an extent comparatively moderate, and yet the influence of it upon the intellectual faculties, as compared with those of the same age and class who refrained from the vicious habit, is very plain.

A further and more serious result of the free use of tobacco now to be mentioned, is the *total* impairment of the intellectual faculties, in other

words, the production of *Insanity*. In the reports of the Lunatic Asylums of this and other countries, this is very frequently included in the list of causes of this sad condition, and the evidences of its influence upon the mental powers are so direct and clear as to be unmistakable. The great increase in the numbers of lunatics during recent years, in various civilized countries, presents a marked parallel with the increased use of this poisonous substance.

For example, in his report for 1866, Dr. Kirkbride, Superintendent of the Pennsylvania Hospital for the Insane, states:—"6 cases were clearly attributable to the uses of tobacco. The pernicious effects thereof are much greater than is generally supposed. In certain temperaments it produces symptoms of an alarming character, and not unfrequently is the cause of obscure and obstinate ailments, connected especially with the gastric and nervous systems. This has often been seen here very strikingly, when patients, after being without a supply for a long time, have again commenced its use.

"Even the most obtuse of those about the patients could not fail in many cases to observe its effects. The use of tobacco and the use of alcoholic stimulants seem to have at least one

"somewhat similar effect on those who have long been addicted to them, and that is an inability to perceive any injurious consequences in their own cases, however obvious they may be to most others. The effects of tobacco on most of the inmates of a hospital for the insane are such, that, on hygienic grounds, even if there were no others, its use should be entirely interdicted in all such institutions. I have never seen the slightest injury result from the immediate and total breaking off of the habit of using tobacco, and the experience of this hospital is a large one in this particular."

■ A very important fact illustrative of the relations of Tobacco and Insanity has recently been brought to light in France by a paper laid before the Academy of Sciences, viz.: that insanity increases in proportion to the amount of tobacco used. Thus it is said that between 1812 and 1832 (20 years) the tax on tobacco produced 28,000,000 of francs, and the lunatic asylums of the country contained 8,000 patients. Since that time, the tobacco revenue has reached the sum of 180,000,000 of francs, and the number of lunatic and paralytic patients has increased to 44,000.

This increase of revenue is about 650 per cent. and the increase of the disease 550 per cent., very

nearly the same proportions. These facts are certainly well worth the consideration of every human being, especially of those with whom the pernicious practice has already become a fixed habit, or a second nature.

Let all reflect, ere it be too late, on the frightful warning contained in the above statistics. The last words of the individual who reported them, should be deeply impressed upon every mind, especially of the young. He said, "Immoderate use of tobacco, and more especially of the pipe, produces a weakness of the brain, and of the spinal marrow, which causes madness."

The following interesting story, illustrative and confirmatory of the views of the officials just quoted, is extracted from a New York paper of November 15, 1867.

✓ "LOVE AND LUNACY. BROUGHT TO AN ASYLUM BY CROSSED LOVE AND EXCESSIVE TOBACCO CHEWING.—Some 12 months ago a young man, who was then employed in the Nashville and Decatur Railroad car shops, a steady, industrious mechanic, formed the acquaintance of a lady about 15 years of age. An attachment speedily sprang up between the two, which resulted in an engagement.

→ "The first troubles arose from the objections urged by the parents of the young lady. The old

folks preferred another man. In anticipation of his marriage, however, the suitor had saved from his wages a considerable amount of money. He could now give the object of his affections a comfortable home, and saw no reason for waiting.

"About two weeks ago he asked that the wedding might take place at an early day, but his *fiancée* wished to defer the nuptials for two months, as at the expiration of that time she would be sixteen. This, with renewed opposition from the parents, seems to have weighed heavily upon his mind. He was an inveterate chewer of tobacco, and had often consumed nearly half a pound per day. This habit had long been at work undermining his nervous system, and his sorrows made him all the more persistent in masticating the weed. His quid was his constant companion. The more he thought of his crossed love, the harder he chewed. There was no limit to his unnatural indulgence. Every sigh was suggestive of a fresh mouthful; every reminiscence of the dear one was followed by copious expectoration.

"The rest is soon told. About two weeks ago he began to exhibit unmistakable signs of lunacy, and is now under a physician's charge. His mental condition is directly attributed by the physicians to the excessive use of tobacco, aggravated by the

effects of disappointed love on a weakened intellect."

Having thus demonstrated the effects of tobacco upon both the physiological and intellectual faculties of the individuals using it, even in the very common form of smoking, and more especially of chewing it, the next point to be considered is the influence of the practice of smoking *upon others*. In the first place, the presence of smoke in the air, derived from the combustion of any vegetable substance whatever, is offensive to the eyes and nose of all who see or inhale it, and moreover it is injurious to the lungs and blood. The principle ingredient of the smoke of all combustible substances is *carbon*, from which it derives its dark color. It is often deposited in the form of soot, showing the great quantity of this material derived from ordinary fuel. But tobacco smoke is doubly offensive and injurious, in consequence of its containing nicotine (the poisonous oil of the plant) combined with the carbon. It is this which gives to tobacco smoke its peculiar odor, so offensive to many, and necessarily injurious to the health of every one who inhales it.

If every human being should understand and appreciate the true value of pure air when inhaled, and the injurious influence of any foreign sub-

stance when absorbed into the blood through the lungs, the writer hereof cannot doubt that tobacco smoking would be totally discarded voluntarily, and perhaps legally. Under this view, it is plain that the practice referred to is a *nuisance* to all who refrain from it; and further still, the foul odor of the clothing, hair, and breath, produced by the absorption of the smoke, renders the person of the smoker also very offensive. No one who properly appreciates the value of social intercourse, and the propriety of keeping his person in a genteel and pleasant condition, can indulge in so foul and offensive a practice, and every one who does so, should be wholly excluded from society for both sanitary and social reasons.

When practised even in the public streets, in the open air, and especially in large halls where people congregate, and in cars and other travelling vehicles, particularly where ventilation is disregarded, the effects of the smoke is offensive and injurious to great numbers of people.

Under such circumstances, it is justly regarded as a *public nuisance*, and, as in all cases of like character, it should be liable to suppression and prevention by the proper authorities.

The placard frequently presented to our observation when passing through the streets of cities,

"Commit no nuisance under penalty of the law," should be understood to be equally applicable to this foul and unnatural emanation, as it is to those which are the demands of nature, no more injurious, and less offensive. Especially on cars, in hotels, and all other places of public resort, should the restriction be rigidly enforced.

The *immoral influences* of this vile habit are sometimes as clearly manifest as are its physical, mental, and social evils. The irritability of the nervous system, and the depression of the mental powers produced by it, are very apt to result in diminished appreciation of, and indifference to, the moral obligations of the individual; in consequence whereof evil deeds and the neglect of intellectual and religious duties are very apt to occur.

One of the most common and serious effects is the demand for alcoholic drinks, to satisfy the extreme thirst, and obviate the prostration of the physical functions resulting from the high temperature and the narcotic influence of the burning weed.

There is no doubt that a large amount of the intemperance now so prevalent, is the immediate and direct effect of tobacco chewing and smoking, and no individual, however safe he may feel him-

self against intemperance before yielding to the temptation of tobacco smoking, can rely upon himself to avoid it after considerable indulgence in the latter practice, as both his moral and intellectual sensibilities are almost certain to become impaired, which fact he cannot himself appreciate. It is therefore difficult and almost impossible for a confirmed lover of tobacco to avoid the terrible evils of intemperance. ←

Having thus demonstrated, by numerous verified facts, the very frequent and almost universal influences of this singular plant, upon the physical, intellectual, moral and social qualities of man, it now only remains to decide whether that being made in the image of God, and endowed with faculties superior to all other created beings, and alone possessed of the power to discriminate between right and wrong, is justifiable to the least extent in indulging in a habit which impairs those noble faculties thus bestowed upon him.

Every habitual tobacco chewer or smoker, when in good health, if able to understand, must admit the wickedness of opium-eating, because of its impairment of the noble faculties which distinguish him from the brute, and that death, when produced by it, which is sometimes the case, is correctly denominated *Suicide*.

The evidence herein presented furnishes ample proof that very similar effects result from the use of Tobacco; wherefore, as the indulgers in this habit impair to a greater or less degree the physical and mental faculties which they are bound by every religious consideration to preserve and improve, they are liable to the same indictment as the Opium-Eater, and to the same ultimate penalty.

Finally, the injurious and often serious influences of tobacco upon the physical and mental faculties, are proven sufficient to convince any reasonable person that no indulger in the use of it can be safely relied upon for the performance of any engagement, requiring a perfectly sound and healthy body and mind. When a contract is being made by a tobacco smoker or chewer, he may be perfectly clear and strong in the qualities required, yet the continuance of the habit must render his capacity uncertain, for at any time the heart or brain may become involved in the influences of the poison, as in many previous instances. In the ordinary business relations of life, particularly those requiring special keenness of intellect, the filthy weed may at any time impose an injunction, and commit its unnatural

employer to the Hospital, the Asylum, or the Grave.

This same consideration is also clearly applicable to the business of Life Insurance.

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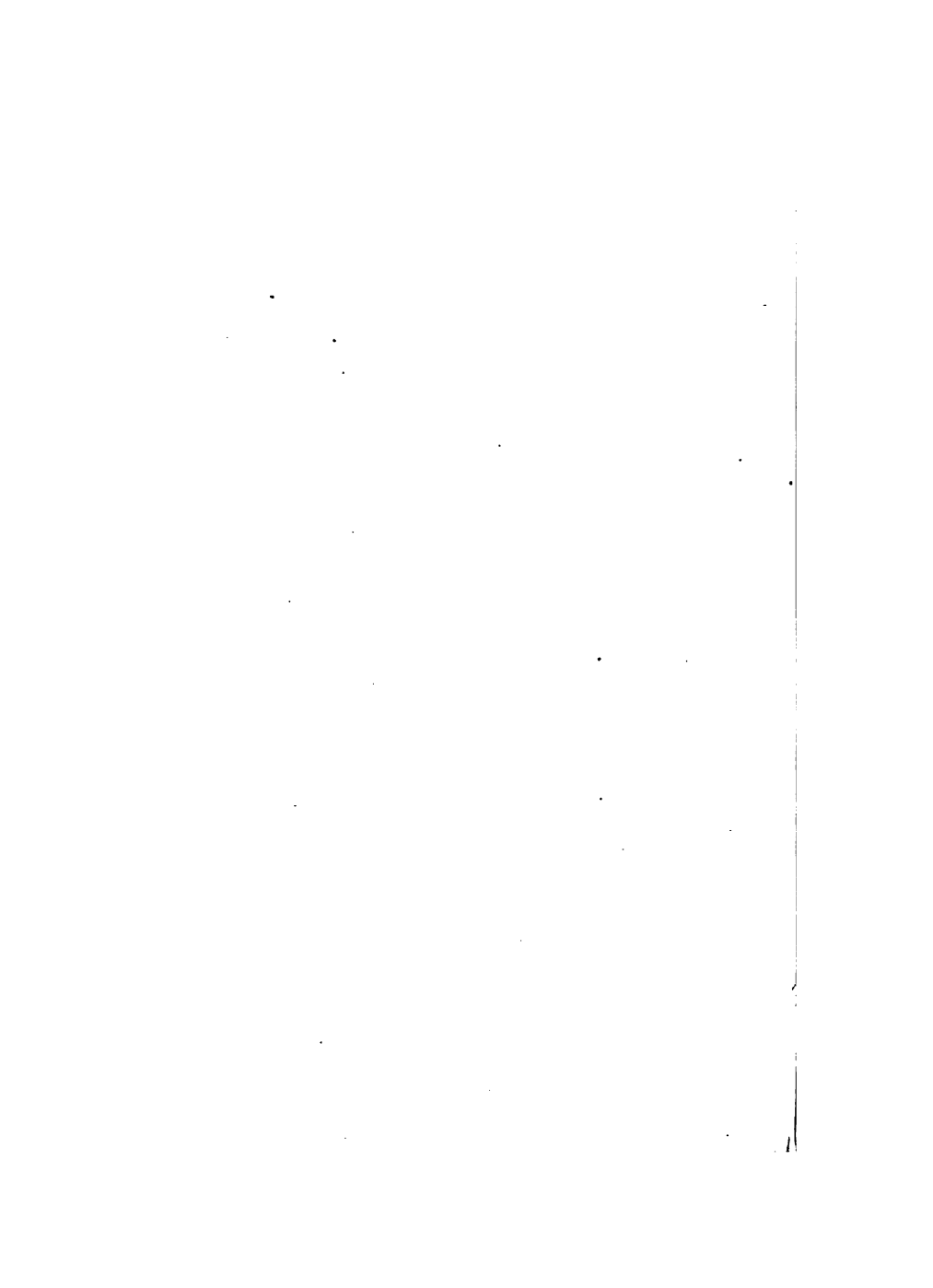
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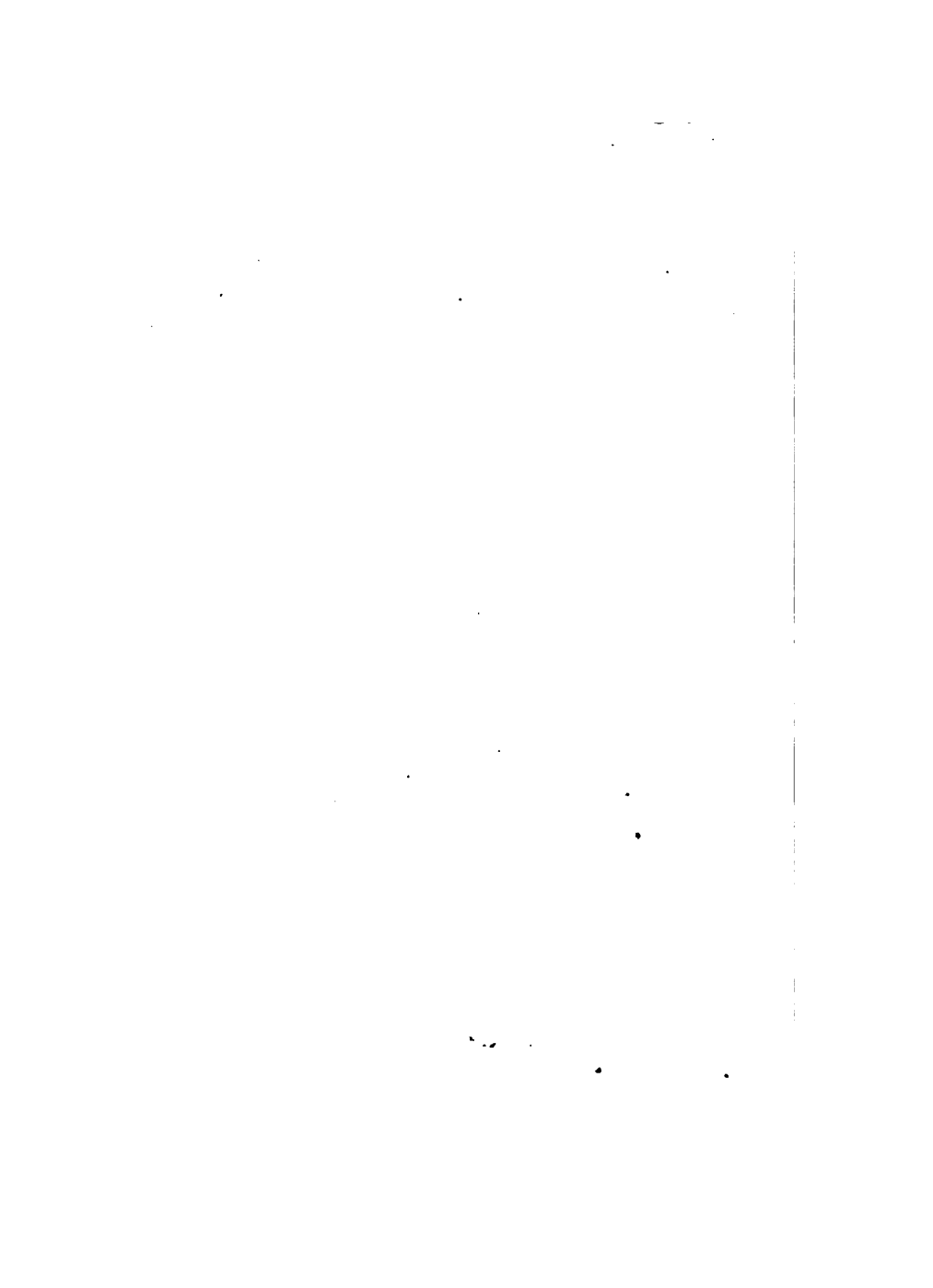
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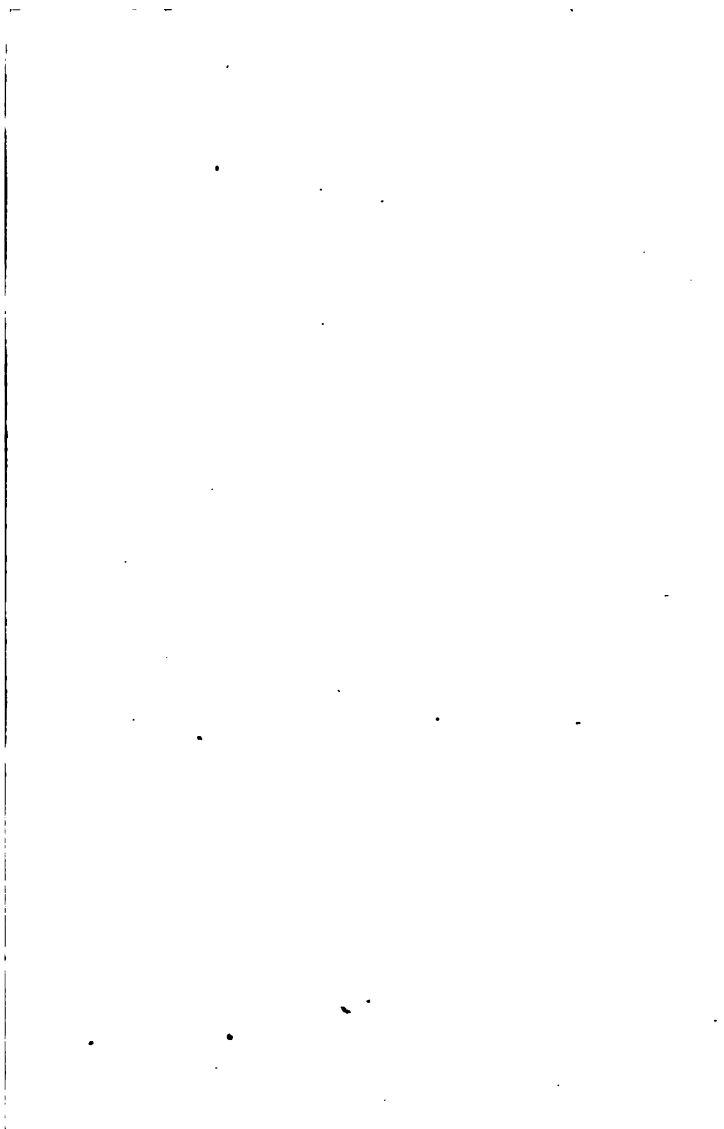
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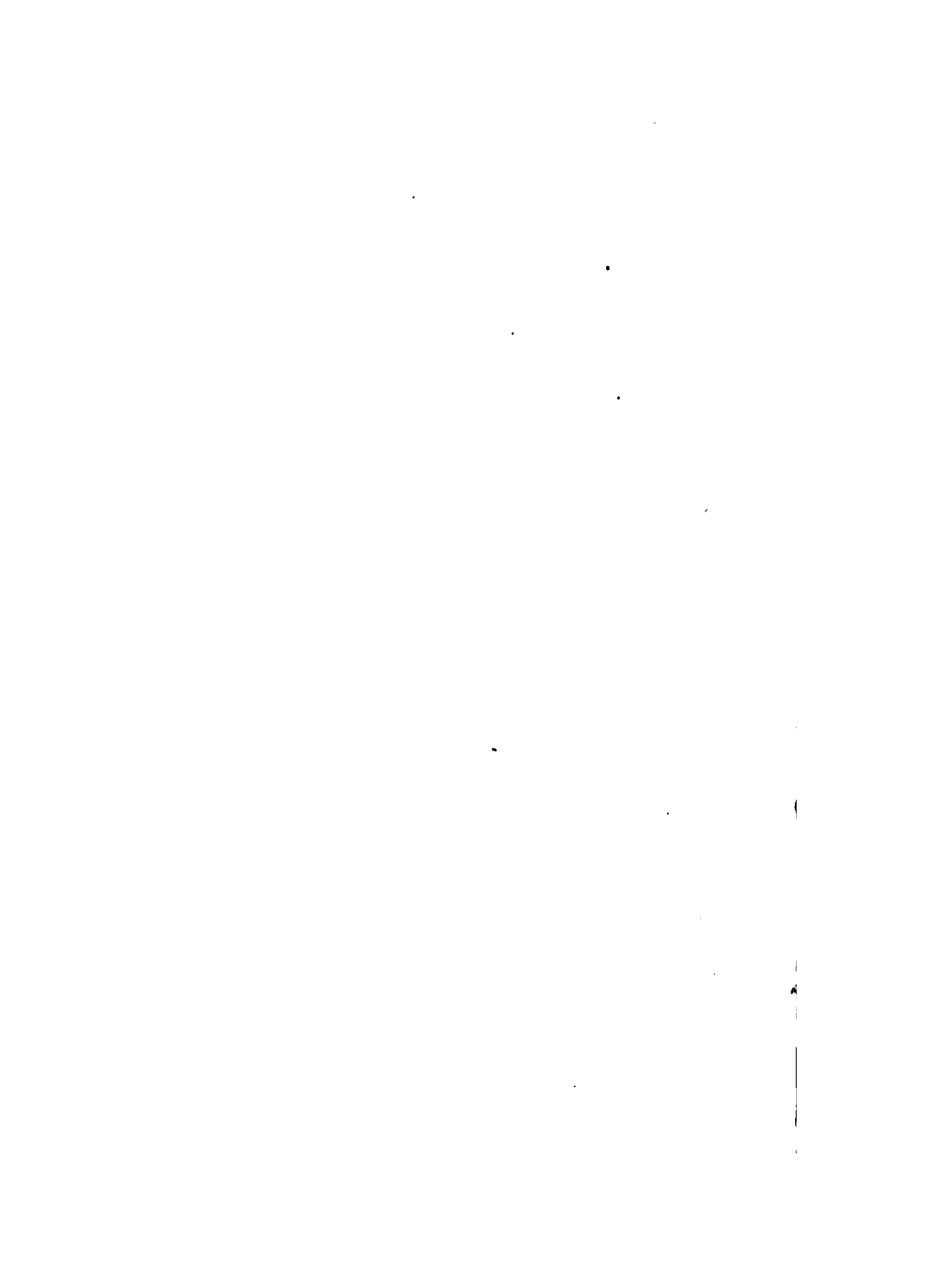
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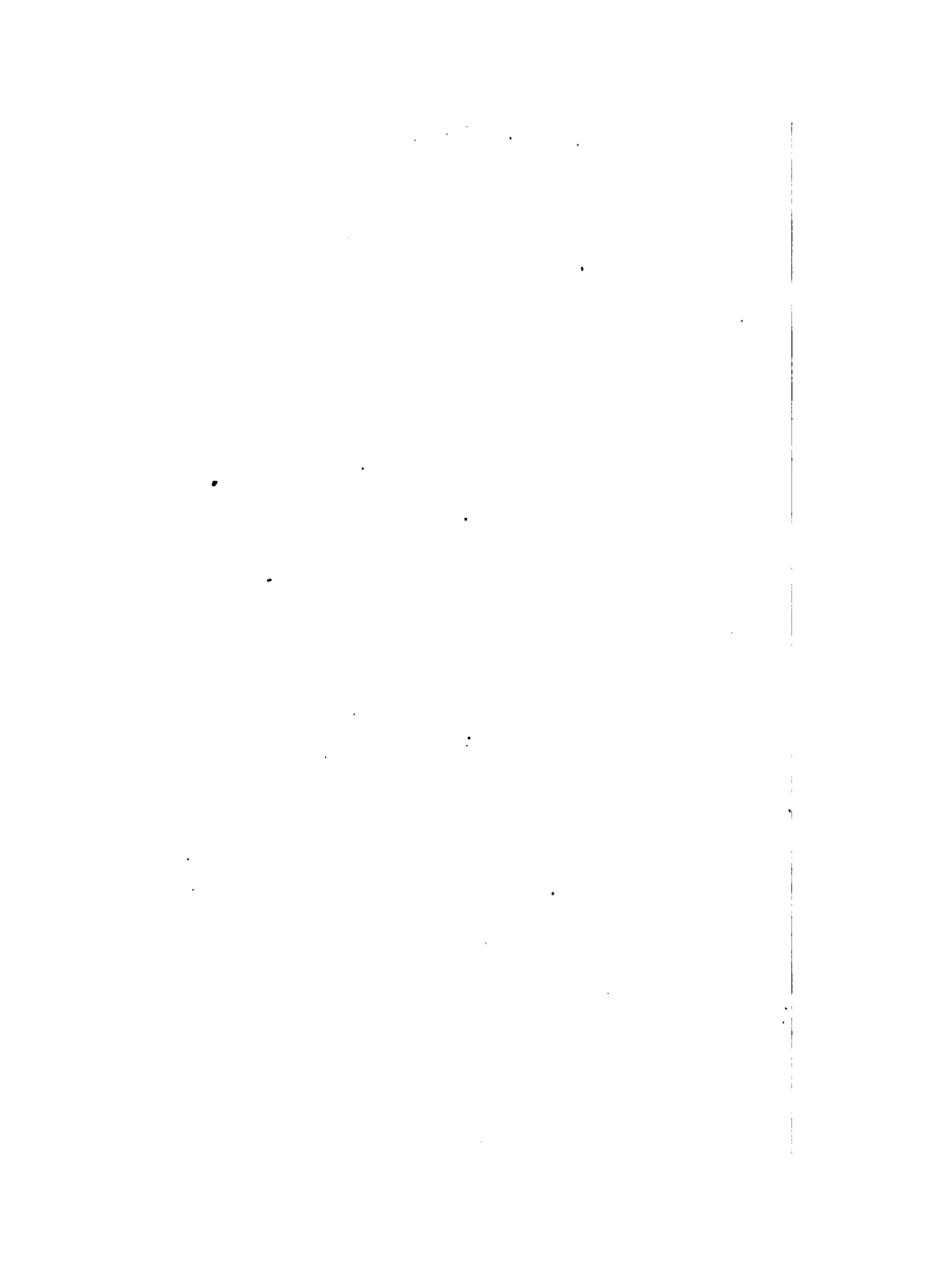
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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

2. The second step is to gather relevant information and data. This may involve research, consultation with experts, or collecting data from various sources.

3. The third step is to analyze the information and data collected. This involves identifying patterns, trends, and relationships that can help in understanding the problem.

4. The fourth step is to develop a solution or answer. This involves applying the knowledge and skills gained from the analysis to the problem at hand.

5. The fifth step is to evaluate the solution or answer. This involves checking the results against the original problem and requirements to ensure that the solution is valid and effective.

6. The sixth step is to communicate the solution or answer. This involves presenting the findings in a clear and concise manner to the relevant stakeholders.

7. The seventh step is to monitor and evaluate the results of the solution. This involves tracking the performance of the solution over time and making adjustments as needed.

8. The eighth step is to document the process and results. This involves creating a record of the steps taken and the outcomes achieved, which can be used for future reference.

9. The ninth step is to reflect on the process and results. This involves thinking about what was learned from the experience and how it can be applied to future problems.

10. The tenth step is to share the results and lessons learned. This involves communicating the findings to a wider audience, which can help to improve the overall quality of the work.

11. The eleventh step is to review the process and results. This involves checking the work against the original requirements and making any necessary adjustments.

12. The twelfth step is to finalize the solution or answer. This involves ensuring that all requirements have been met and that the solution is ready for implementation.

13. The thirteenth step is to implement the solution or answer. This involves putting the solution into practice and monitoring its performance.

14. The fourteenth step is to evaluate the results of the implementation. This involves checking the performance of the solution against the original requirements and making any necessary adjustments.

15. The fifteenth step is to communicate the results of the implementation. This involves presenting the findings to the relevant stakeholders.

16. The sixteenth step is to monitor and evaluate the results of the implementation. This involves tracking the performance of the solution over time and making adjustments as needed.

17. The seventeenth step is to document the process and results. This involves creating a record of the steps taken and the outcomes achieved, which can be used for future reference.

18. The eighteenth step is to reflect on the process and results. This involves thinking about what was learned from the experience and how it can be applied to future problems.

19. The nineteenth step is to share the results and lessons learned. This involves communicating the findings to a wider audience, which can help to improve the overall quality of the work.

20. The twentieth step is to review the process and results. This involves checking the work against the original requirements and making any necessary adjustments.

21. The twenty-first step is to finalize the solution or answer. This involves ensuring that all requirements have been met and that the solution is ready for implementation.

22. The twenty-second step is to implement the solution or answer. This involves putting the solution into practice and monitoring its performance.

23. The twenty-third step is to evaluate the results of the implementation. This involves checking the performance of the solution against the original requirements and making any necessary adjustments.

24. The twenty-fourth step is to communicate the results of the implementation. This involves presenting the findings to the relevant stakeholders.

25. The twenty-fifth step is to monitor and evaluate the results of the implementation. This involves tracking the performance of the solution over time and making adjustments as needed.

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